



California Regional Water Quality Control Board

Lahontan Region



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INVESTIGATIVE ORDER NO. R6V-2011-0054, QUARTERLY REPORTING ON PLUME EVALUATION MONITORING REPORTS, PACIFIC GAS AND ELECTRIC COMPANY, HINKLEY COMPRESSOR STATION, SAN BERNARDINO COUNTY— CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002

Legal and Regulatory Authority

This Investigative Order directs PG&E to submit quarterly technical reports to the Water Board for groundwater monitoring and data evaluation methods to evaluate the stability of the chromium plume in groundwater from the PG&E Hinkley Compressor Station. The Water Board's requirement that you submit technical reports is made pursuant to Section 13267 of the California Water Code. Pursuant to Section 13268 of the Water Code, a violation of Water Code Section 13267 requirement may subject you to civil liability of up to \$1,000 per day for each day in which the violation occurs.

Background

Cleanup and Abatement Order (2008 CAO) No. R6V-2008-0002 Order No. 3 requires PG&E to achieve containment of the chromium plume in groundwater by December 31, 2008. Order No. 3.2 specifies that compliance with the order is determined by comparing groundwater samples to the control limits established using the methodology set in the July 2008 *Boundary Control Monitoring Program* (BCMP).

Section 3 of the July 2, 2008 BCMP methodology, establishes a step-by-step process for evaluating plume stability, including:

- Detection Monitoring Program (DMP): The DMP consists of comparing Cr(VI) laboratory and analytical results for individual wells to control limits. Well-specific control limits were established using data collected between February 5,



2005 and the 3rd Quarter 2008. Analytical data is collected during each DMP sampling event is compared to the well-specific control limit.

- Verification Sampling: If a control limit is exceeded, the well(s) that are exceeding control limits will be re-sampled to further evaluate well data. If results verify a control limit has been exceeded, an evaluation monitoring program process will be conducted.
- Evaluation Monitoring Program (EMP): The EMP process consists of various assessment methods to evaluate well data when a control limit is exceeded under the DMP and confirmed by verification sampling. The cumulative results will be used to determine if corrective action is warranted to maintain plume control. Assessment methods include:
 - Remedial pumping efforts
 - Individual Well Trends
 - Historical Data Review
 - Well Grouping Analysis
 - Additional Data Collection

Analysis of assessment methods are contained in an Evaluation Monitoring Report. The report will make one of three conclusions: (1) the data do not suggest a loss of plume control; (2) there is insufficient data to conclude whether there is a loss of plume control; (3) the data indicates a loss of plume control.

- Watch List: A table of monitoring wells, their respective designation based on historic concentration, and their respective control limit compared to monitoring events. The watch list is intended to provide clear identification and tracking of wells where control limits are exceeded.
- Corrective Action Program: If the Evaluation Monitoring Report indicates a loss of plume control, a corrective action plan is proposed to address plume stability.

Order No. 6 of the 2008 CAO requires PG&E to submit groundwater monitoring data associated with several monitoring programs, including the site-wide groundwater monitoring program, the Desert View Dairy Land treatment unit, the Central Area In-Situ Remediation Zone project, and the Source Area In-Situ Remediation Zone project, on a quarterly basis. The Methodology of the BCMP is incorporated into Order 3.2 of the CAO. However, there is no explicit requirement for PG&E to submit quarterly monitoring data associated with the BCMP in the text of the 2008 CAO. Page 5 of the BCMP states that ***“PG&E will submit the initial EMP report to Board staff within 6 weeks of submitting re-sampling. The letter transmitting the results of that sampling will outline the subsequent EMP process.”*** Furthermore, beginning with the fourth quarter 2008, PG&E has submitted BCMP Evaluation Monitoring Reports to the Water Board on a quarterly basis in order to demonstrate plume containment compliance as required by Order No. 3.

On June 27, 2011, Board staff notified PG&E that the First Quarter 2011 Evaluation Monitoring Report for the BCMP had not been received by the Water Board, nor had been uploaded into Geotracker, as has been done since fourth quarter 2008. On July 7, 2011 PG&E's Principal Remediation Specialist, Eric Johnson, submitted a letter that briefly describes the conclusions of the First Quarter 2011 evaluation monitoring for plume stability. Mr. Johnson states that "Seven BCMP wells¹ exceeded their Cr (VI) control limits. All of these wells have previously exceeded their Cr(VI) limits and all were reviewed as part of the BCMP Evaluation Monitoring Program in prior EMP reports." The letter however provides no data, discussion of data, or interpretations that would support the conclusion given in the Evaluation Monitoring Report. Rather, the letter states, "PG&E's interpretation of the BCMP is that, in this situation, no evaluation monitoring report is needed."

Comments

Board staff disagrees with PG&E's interpretation that no report is needed for first quarter 2011 or in subsequent quarters. Until first quarter 2011, PG&E has complied with Order No. 3 by submitting Evaluation Monitoring Reports in the months of March, June, September, and December of each year. PG&E's July 7, 2011 letter citing the conclusions of the First Quarter 2011 Evaluation Monitoring Program is not a substitution for the report, data, or information to be contained in such a report. A technical report, such as those submitted in the past, is necessary for the Water Board to understand plume stability, or lack thereof. When there is a lack of plume stability, data and information in the reports are used to identify the location of migrating plume boundaries and where beneficial uses are threatened.

The 2008 CAO and BCMP do not state an explicit reporting frequency and reporting contents to be submitted to the Water Board under the BCMP. BCMP reporting data is necessary for determining compliance with 2008 CAO Order No. 3. This Investigative Order clarifies the requirements for submission of reports and data collected in accordance with the methodology contained in the BCMP.

Requirements

Pursuant to section 13267 of the California Water Code, PG&E is required to submit a technical report to the Water Board **by August 26, 2011**, for the first quarter 2011 evaluation monitoring program. The technical report must contain the following information:

1. Introduction
2. Exceedances of BCMP Cr(VI) Control Limits
 - a. Detection Monitoring Program
 - b. Verification Sampling
 - c. Evaluation Monitoring Program

¹ MW-14A, MW-23B, MW-28A, MW-42B2, MW-50A, MW-56, and MW-62A



- d. The "Watch List"
 - e. Corrective Action Program
 - f. Tabulation of the results and evaluation of wells that exceed Cr(VI) and Cr(T) control limits for boundary control monitoring wells.
 - g. Tabulation of the results of well grouping analysis for wells exceeding control limits
 - h. Map showing wells in the BCMP and August 2008 chromium boundary outline.
 - i. Map showing monitoring well location, chromium plume boundaries, and groundwater capture zone.
 - j. Graphs showing chromium concentration trends of Cr(VI) and Cr(T) for wells exceeding control limits.
3. The stamp and signature of a state licensed civil engineer or geologist.

Subsequent quarterly evaluation monitoring reports must be submitted to the Water Board on the schedule previously used: **September 10, December 10, March 10, and June 10 of each year**. In addition, reports must be uploaded to the State Water Resources Control Board's Geotracker database within three working days of the due date.

Please contact me at 542-5436 or Lisa Dernbach at (530) 542-5424, if you have any questions.



LAURI KEMPER
ASSISTANT EXECUTIVE OFFICER

cc: PG&E Technical Mail List and lyris list (and web posting)

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